



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/673,567      | 10/18/2000  | Yoshihiko Hibino     | 001248              | 8750             |

7590 04/14/2005

Armstrong Westerman Hattori McLeland & Naughton  
1725 K Street NW Suite 1000  
Washington, DC 20006

|          |
|----------|
| EXAMINER |
|----------|

SCHWARTZ, PAMELA R

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1774

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/673,567

Applicant(s)

HIBINO ET AL.

Examiner

Pamela R. Schwartz

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2005.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 2, 4-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

1. Rejection under 35 USC 112 has been reconsidered and withdrawn in view of applicant's specification and showings.

2. Upon careful consideration of applicants' specification, it appears that applicants has demonstrated criticality for the lower end point of the range of the ratio of brightening agent to polymer fixing agent when the polymeric fixing agent is a graft copolymer of polydimethyldiallyl-ammonium chloride and polyvinyl alcohol. See Table 1, Examples 17 and 20 and Comparative Examples 9 and 10. Claims limited to this polymeric fixing agent and including the other limitations of claim 1 would be allowable.

3. Claims 1, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koide et al. (5,756,151) in view of Niemoller et al. (5853540). Koide et al. disclose a paper which may be used in an ink jet recording process (see col. 1, lines 9-14). At col. 3, the reference discloses brightness values of diffuse blue reflectance between 87 and 100 percent, fluorescence intensity values of 2.5 to 10, the use and control of fluorescent brightness in recording papers and that the type of fluorescent brightener used by applicants is well known in the art (see col. 3, lines 12-21, 39-61 and 64-65). The reference also discloses controlling the amount of brightener in order to achieve desirable results. The reference discloses inclusion of a fluorescent dye to control the appearance of the medium (see col. 4, lines 10-36). The medium is formed from a paper support which includes loading material, pulp, brightening agent and starch as a binder (see Example 1).

Niemoller et al. disclose an ink jet recording material having a recording layer of cationic polymer dye fixing agent which may be a copolymer of polyvinyl alcohol and

Art Unit: 1774

polydiallyldimethyl-ammonium chloride, in combination with binder, pigments and auxiliaries (see col. 2, lines 64-67 and col. 3, lines 22-32). These dye fixing agents are well known in the art as highly advantageous additives to impregnants or coatings for ink jet recording materials as they fix dye in the location it is applied to the recording surface. Based upon the disclosure of the reference and the knowledge of one of ordinary skill in the art, it would have been obvious to include a commercially available copolymer of these materials in the coating composition of the primary reference to serve a dye fixing function as taught by the secondary reference.

4. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koide et al. (5,756,151) in view of Niemoller et al. (5853540) as applied to claim 1 above, and further in view of Koji et al. (EP 0745,488).

Koji et al. disclose formation of an ink jet recording material with a support including calcium carbonate as loading material, controlled ash content and using a combination of pulp that may include waste paper pulp. See page 4, lines 44-57 and page 5, lines 22-26. Use of calcium carbonate filler is taught to improve water resistance, and the ash content is controlled to maintain absorption of ink and to control water resistance as well. Based upon the disclosure of Koji et al, it would have been obvious to one of ordinary skill in the art to use calcium carbonate as the loading material of the primary reference, to include waste paper pulp in the support and to control the ash content in order to control properties of ink absorption and water resistance in desired ranges.

Art Unit: 1774

5. Applicant's arguments with respect to claims 1, 2 and 4-6 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 1774

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

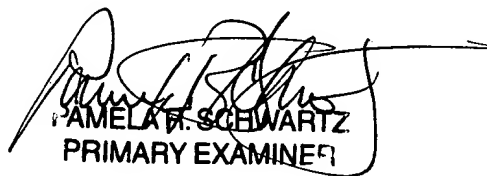
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz

April 12, 2005



AMELA A. SCHWARTZ  
PRIMARY EXAMINER